

**REMARKS**

In light of the above amendatory matter and remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claims 1-21 and 45-52 remain in this application. Claims 22-44 and 53-77 have been canceled.

At paragraphs 3-13 of the outstanding office action, the Examiner has rejected claims 1-3, 10-15, 17, 18, 20, 45, 46, 48, 49 and 51 under 35 USC 102(b) as being anticipated by Rogers (US Patent No. 5,497,500). Applicants respectfully traverse the rejection.

Claims 1, 14 and 45 are amended herein to recite (referring to the amendments to claim 1) that the second processing element is placed in a particular location downstream from said first processing element, that both the first and second processing elements are adapted to receive a waveform signal and to process the received waveform signal and to forward the processed waveform signal to a downstream processing element. Furthermore, the claims continue to recite that the waveform signal processed by the first processing element is forwarded to the second processing element upon a request to receive the processed waveform signal passed upstream from said second processing element the first processing element. The first processing element then processes and forwards the waveform signal thus processed by the upstream first processing element to the second processing element. This amendment makes explicit what had been implicitly recited in the claims, that the processing web operates in a “pull-type” arrangement for processing waveform signals, whereby upstream processing and resulting processed waveform signals are supplied to a downstream element only when and if the downstream element requests that processed waveform signals from the upstream element. That is, processed waveform signals are pulled downstream from the upstream element. Therefore, in

accordance with the claimed invention, processing does not occur in an upstream component until that processing is requested by a downstream component. This precludes the need for a buffer or other storage medium to store the output from an upstream processing element that is new yet needed. See, for example, page 14, line 13 to page 15, line 2 and page 18, lines 4-22 of the instant specification.

It is respectfully submitted that Rogers does not describe such a pull-type system. Indeed, Rogers depicts a system where processing of upstream data is processed in a conventional manner, when appropriate input data is received at the inputs of the processing element. However, this is just the problem the present invention is trying to avoid. Because each processing element in Rogers processes data upon receipt of appropriate inputs, a buffer is required between each processing element to store an output until needed by the next processing element. Indeed, processing in the Rogers reference is shown as progressing from the provision of input data in each case, rather than the request for processing from a downstream component.

The Examiner refers to portions of Column 21 of Rogers to teach such upstream requests. However, applicants submit that this portion of Rogers describes passing of tokens of some sort, and not of requesting and passing processed waveform signals. Processing of waveform signals in Rogers is not performed according to “pull-type processing”.

In contrast, however, in accordance with the present invention, an upstream processing element does not process waveform signals, even if appropriate inputs are available, until such processing is requested by a downstream processing element. This results in a cascade-type processing system where input waveform signals may be stored in a single buffer. Upon a request for processing of a waveform signal by a last processing element, all processing elements upstream in a chain back to the original storage buffer in turn request that an upstream processor

process waveform signals. Therefore, when processing actually takes place, data is processed at each processing element and then passed to a next element waiting for the processed waveform signals, having previously requested that the upstream processing element perform the requested processing. Processed waveform signals move through the system and no intermediate buffers are required.

Because Rogers fails to depict such a method and system as claimed, Applicants respectfully submit that independent claims 1, 14 and 45 are patentably distinct from Rogers.

Claims 2-3 and 10-14 depend from claim 1; claims 17, 18, 20 depend from claim 14; and claims 46, 48, 49 and 51 depend from claim 45. Consequently, these dependent claims include all of the limitations recited by the respective claim from which they depend. Therefore, the rejections of these dependent claims should be withdrawn for the reasons noted above. Additionally, each of the dependent claims presents an independently patentable combination in its own right, and is therefore patentable for this additional reason.

Applicants therefore respectfully request that the rejection of claims 1-3, 10-15, 17, 18, 20, 45, 46, 48, 49 and 51 under 35 USC 102(b) be withdrawn.

At paragraphs 15-23 the Examiner has rejected claims 4-9, 19, 21, 50 and 52 under 35 USC 103(a) as being unpatentable over Rogers in view of Zink (US Patent No. 6,738,964). Applicants respectfully traverse the rejection.

Claims 4-9, 19, 21, 50 and 52 depend either directly or indirectly from one of independent claims 1, 15 and 45 and are therefore allowable for this reason alone, and additionally as presenting independently patentable combinations in their own right. Applicants submit that the addition of Zink fails to cure the defects of Rogers noted above with respect to

the independent claims. Applicants therefore respectfully request that the rejection of claims 4-9, 19, 21, 50 and 52 under 35 USC 103(a) be withdrawn.

At paragraph 25 the Examiner has rejected claims 16 and 47 under 35 USC 103(a) as being unpatentable over Rogers. Applicants respectfully traverse the rejection.

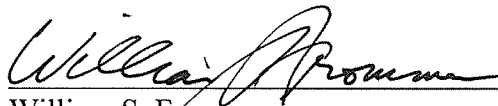
Claims 16 and 47 depend from independent claims 15 and 45, respectively, and are therefore allowable for this reason alone, and additionally as presenting independently patentable combinations in their own right. Applicants therefore respectfully request that the rejection of claims 16 and 47 under 35 USC 103(a) be withdrawn.

### **CONCLUSION**

Applicants have made a diligent effort to place claims 1-21 and 45-52 in condition for allowance, and notice to this effect is earnestly solicited. If the Examiner is unable to issue a Notice of Allowance at this time, it is respectfully requested that the Examiner contact the undersigned attorney to discuss any further outstanding issues.

Early and favorable consideration is respectfully requested.

Respectfully submitted,  
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